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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,534	04/05/2000	Kay Rokman	30-509	7187

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EXAMINER

SALVATORE, LYNDIA

ART UNIT

PAPER NUMBER

1771

DATE MAILED: 01/16/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/543,534

Applicant(s)

ROKMAN ET AL.

Examiner

Lynda M Salvatore

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 51-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 51-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's amendment, Paper No. 12 has been entered as requested. Claims 1-13, 37-38 and 41-50 have been cancelled.
2. Applicant's arguments with respect to claims 51-60 have been considered but are moot in view of the new ground(s) of rejection. *Claim Rejections - 35 USC § 112*
3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 60 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, it is not described how polyvinyl alcohol, which is known to be hydrophilic and water soluble, rendered insoluble. Is the polyvinyl alcohol rendered insoluble in water via a cross-linking reaction?

### *Claim Rejections - 35 USC § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 51-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes et al., US 4,112,174 in view of Weeks, 5,409,573.

The patent issued to Hannes et al., is directed to the formation of a fibrous glass mat comprising monofilament glass fibers and elongated glass fiber bundles (Column 3, 10-14). Hannes et al., teaches coating the fiber bundles with a liquid insoluble binder to keep the fiber bundles together (Column 4, 40-45). The diameter of the glass fibers is preferably between 12 and 19 microns and the number of filaments per bundle is preferably between 20 and 300 (Column 4, 20-21 and 39-41). Hannes et al., teaches that there is no absolute limitation to the length of the fiber bundles, but that bundles below 15mm do not have sufficient reinforcement functionality. Instead, Hannes et al., suggests using fibers bundles with a length between 65 and 75mm (Column 4, 46-55). The content of fiber bundles present in the mat can range from 5% up to as much as 90% (Column 4, 60-65).

Hannes et al. does not teach adding heat activated binder fibers to increase the integrity of the mat, however, the patent issued to Weeks discloses a perform glass fiber reinforced thermoplastic composite (Column 1, lines 59-61). Weeks teaches that the chopped glass strand bundles are adhered with thermoplastic resin particles in the form of fine denier, short cut wettable staple fibers (Column 1, lines 65-69). Weeks, further teaches that composite of reinforcing fibers and thermoplastic fibers results in a structure having excellent strength and processability (Column 2, lines 5-10).

Therefore, motivated by the desire to produce a glass fiber mat having increased strength it would have been obvious to one having ordinary skill in the art to add the thermoplastic fibers of Weeks to the non-woven glass fiber mat of Hannes et al.

7. Claims 58 and 59 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes et al., US 4,112,174 in view of Weeks, 5,409,573 as applied to claim 51 above and further in view of Helwig et al., US 6,054,022.

Hannes et al., and Weeks fail to teach the density of the non-woven mat, however the patent issued to Helwig et al., teaches a method for forming a non-woven glass fiber mat comprising bundles of chopped fibers (Abstract). Helwig et al., teaches that the chopped glass fibers have a lengths which can range from 3mm to 50mm and that the size of each bundle contains 50-500 fibers (Column 2, lines 60-67). Helwig et al., discloses that the basis weight range of the non-woven glass mat is from about 40g/m<sup>2</sup> to 500g/m<sup>2</sup> (Column 3, lines 5-7).

Therefore, motivated to provide a lightweight glass reinforcement mat it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the teachings of Helwig et al., and optimize the density of the glass fiber mat of Hannes et al.

8. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hannes et al., US 4,112,174.

Hannes et al., fails to teach the claimed epoxy resin or PVOH (polyvinyl alcohol), however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select an epoxy resin or polyvinyl alcohol since these substances are known to have insolubility properties in water. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416


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*Conclusion*

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls 

January 13, 2003

  
CHERYL A. JUSKA  
PRIMARY EXAMINER